

ABSTRACT

(0060) A plug tool for forming internally helically ribbed tube comprises a plug body for being rotatably disposed in a die orifice of a drawing die. The plug body has a central longitudinal axis, a plurality of external grooves equally spaced about the axis and a plurality of external lands in alternating arrangement with the grooves. The grooves extend along the plug body at a helix angle to the axis. Each groove has a normal cross-section defined by a root surface and opposing flank surfaces extending angularly outwardly from the root surface to adjacent land surfaces. The flank surfaces extend angularly outwardly from the root surface in opposite directions at different angles from one another. A method for forming internally helically ribbed tube involves drawing a length of tubing over the plug body rotatably disposed in a die orifice of a drawing die and constricting the tubing in the drawing die to force the tubing into the grooves of the plug body to form a plurality of internal helical ribs in the tubing in correspondence to the grooves.